

All Fiber Gas Reference Cell, Phase I

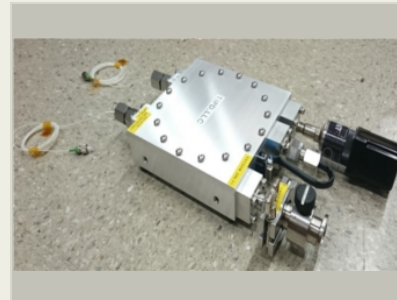
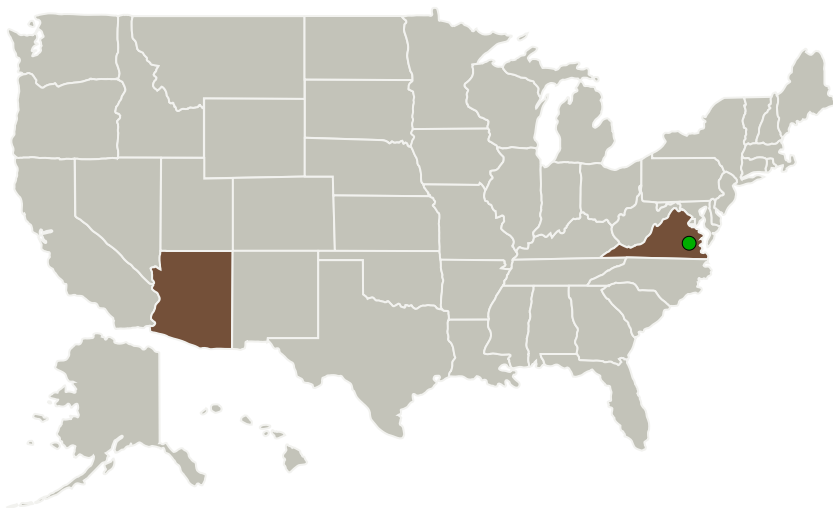
Completed Technology Project (2017 - 2017)



Project Introduction

TIPD proposed to build a stable, robust, rugged, compact, fiber coupled gas reference cell (GRC) with tens of meters of interaction length that is required in atmospheric constituent and trace gas analysis sensors as well as LIDAR instruments in the near and shortwave infrared supporting NASA's future planetary science missions. Specifically, this proposal addresses the need for a water vapor reference cell that is required for differential absorption LIDAR (DIAL) systems for water sensing in 820nm and 940nm bands.

Primary U.S. Work Locations and Key Partners



All Fiber Gas Reference Cell,
Phase I Briefing Chart Image

Table of Contents

Project Introduction	1
Primary U.S. Work Locations and Key Partners	1
Images	2
Organizational Responsibility	2
Project Management	2
Technology Maturity (TRL)	2
Technology Areas	3
Target Destinations	3

Organizations Performing Work	Role	Type	Location
TIPD, LLC	Lead Organization	Industry	Tucson, Arizona
● Langley Research Center(LaRC)	Supporting Organization	NASA Center	Hampton, Virginia

Primary U.S. Work Locations

Arizona	Virginia
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Images



Briefing Chart Image

All Fiber Gas Reference Cell, Phase I Briefing Chart Image
(<https://techport.nasa.gov/image/131976>)

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

TIPD, LLC

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

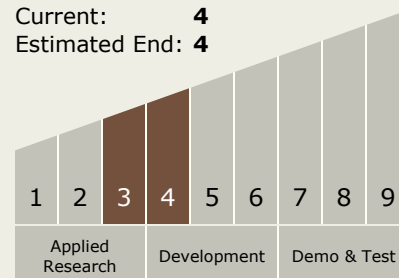
Carlos Torrez

Principal Investigator:

Valery Temyanko

Technology Maturity (TRL)

Start: 3
Current: 4
Estimated End: 4



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Technology Areas

Primary:

- TX08 Sensors and Instruments
 - └ TX08.1 Remote Sensing Instruments/Sensors
 - └ TX08.1.5 Lasers

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System